

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Richmond Division**

ROBERT BENEDICT,

Plaintiff,

v.

Civil Action No. 3:17-cv-109

HANKOOK TIRE COMPANY
LIMITED, et al.,

Defendants.

MEMORANDUM OPINION

This matter is before the Court on HANKOOK TIRE COMPANY LIMITED'S AND HANKOOK TIRE AMERICA COMPANY'S MOTION TO EXCLUDE TESTIMONY OF PLAINTIFF'S EXPERT DAVID SOUTHWELL (ECF No. 54). The Court previously denied the motion, with one minor exception, by ORDER (ECF No. 221) dated November 27, 2017. This Memorandum Opinion sets out the reasoning for that decision.

I. BACKGROUND

In this products liability action, Robert Benedict sues Hankook Tire Company Limited ("HTCL") and Hankook Tire America Corporation ("HTAC") for the production and distribution of an allegedly defective tire. Defendants seek to exclude the testimony of Benedict's tire expert, David Southwell.

A. Factual Context

A detailed overview of the facts of this case appears in the Court's Opinions resolving Benedict's and Defendants' motions for summary judgment (ECF Nos. 341, 343). In short, however, this action involves a single-vehicle accident that occurred when the front right tire (the "subject tire") of a cement truck driven by Benedict experienced a tread separation, after which the truck collided with an embankment on the side of the road. First Am. Compl. 2-3. The subject tire was a Hankook Aurora TH08 Radial 425/65 R22.5 manufactured by HTCL in South Korea in 2005. Defs.' Br. 2; First Am. Compl. 2. Benedict alleges that the subject tire's failure was caused by manufacturing defects, and he relies on the expert testimony of Southwell to substantiate his claim. First Am. Compl. 2-9; Nov. 20, 2017 Hr'g Tr. 4; Pl.'s Opp'n Ex. C 4.

B. Procedural History

Benedict initially asserted three claims: (1) products liability negligence (including manufacturing defect, design defect, and failure to warn); (2) breach of the implied warranty of merchantability; and (3) breach of the implied warranty of fitness for a particular purpose. First Am. Compl. 5-11. He is now pursuing only the negligent manufacturing and implied warranty of merchantability claims. Nov. 20, 2017 Hr'g Tr. 4.

Both sides moved for summary judgment. Benedict sought summary

judgment as to Defendants' contributory negligence defense. Defendants sought summary judgment as to Benedict's active claims. Related to their motion, Defendants sought exclusion of the testimony of Southwell. The Court ruled on these three motions during a hearing held on November 20, 2017, Nov. 20, 2017 Hr'g Tr. 152, and issued an ORDER (ECF No. 221) on November 27, 2017 formalizing that decision. This Opinion is thus one of three detailing the Court's reasoning in this matter. (ECF Nos. 341-43).

C. Southwell's Testimony and Qualifications

To examine whether Southwell's testimony should be excluded, it is necessary first to examine what his testimony is and what qualifications he possesses.

1. Southwell's Defect Theory

Benedict's tire expert, Southwell, posits that the subject tire failed for two primary reasons: (1) the subject tire's components did not sufficiently adhere to each other; and (2) excessive oxidation led to degradation of the subject tire. Pl.'s Opp'n Ex. C 11, 25, 38-39. Each will be discussed in turn.

Southwell's first theory, in essence, is that the subject tire's components were "not properly 'stuck together.'" Pl.'s Opp'n Ex. C 11. Tires generally contain several rubber components. See Pl.'s Opp'n Ex. C 11-13, 17-19. In a finished tire, these components adhere

to each other through, at least as relevant here, interdiffusion and sulphur cross linking. See Pl.'s Opp'n Ex. C 11-13.

The first of these processes, interdiffusion, involves "the spontaneous movement of [rubber molecule] chains across the interface of two adjoining components." Pl.'s Opp'n Ex. C 12. This means that, when two rubber components come into contact, the rubber molecules within each component begin to migrate across the physical boundary between them. Pl.'s Opp'n Ex. C 12-14. This process "causes the interface between the two components to in effect disappear," thereby binding them together. Pl.'s Opp'n Ex. C 12-13.

The second process, sulphur cross linking, further strengthens the bonds between components. See Pl.'s Opp'n Ex. C 12-13. During tire production, sulphur is typically added to the rubber used to create the tire's components. See Pl.'s Opp'n Ex. C 11-12. Once these components are assembled, they are subjected to heat and pressure over time, which causes the sulphur to form molecular "bridges" or cross links between the rubber molecule chains. See Pl.'s Opp'n Ex. C 11-13. If there is sufficient interdiffusion and cross linking, the rubber components of a tire should be "indistinguishable." See Pl.'s Opp'n Ex. C 12-13.

There are, however, factors that can limit the component adhesion created by these processes. See Pl.'s Opp'n Ex. C 14-15, 19-20. For example, it is possible that the surface of a compound

can be become contaminated. Pl.'s Opp'n Ex. C 14. If it does, interdiffusion will be inhibited at the contamination site, "given the extremely small lengths of the chains crossing the interface." See Pl.'s Opp'n Ex. C 14. Likewise, after sulphur has been added to the rubber, but before the rubber components come into contact with one another, cross links will begin forming within each component. See Pl.'s Opp'n Ex. C 13, 19-20. If too many appear, this premature cross linking will reduce interdiffusion "because the cross-linked polymer chains are far less mobile and therefore less able to move across the interface." Pl.'s Opp'n Ex. C 20. It also reduces the extent to which further cross linking can occur between components "because some of the sulphur molecules at the surface have been consumed." Pl.'s Opp'n Ex. C 20. The susceptibility of rubber components to these and other issues that reduce bond strength results in a definite "shelf life" of pre-assembly components. See Pl.'s Opp'n Ex. C 20.

Southwell asserts that there was "incomplete interdiffusion and component adhesion" in the subject tire. Pl.'s Opp'n Ex. C 20. He concludes that this is because "[t]he subject tire displays multiple areas of liner imprint." Pl.'s Opp'n Ex. C 20.

Southwell's "liner imprint" conclusion is based on the fact that rubber tire materials are often initially covered by a liner to guard against layers of the same compound adhering to each other "and to

reduce the possibility of contamination." Pl.'s Opp'n Ex. C 18. When this liner is removed, it can create a visible "impression" on the rubber. Pl.'s Opp'n Ex. C 19. After tire production is complete, this "residual liner impression is normally obliterated as the adjacent components are chemically bonded." Pl.'s Opp'n Ex. C 19. Where there has been "a lack of complete interdiffusion and cross-linking across the interfaces," however, the liner imprint may remain. See Pl.'s Opp'n Ex. C 19-20. Thus, Southwell concludes, "pervasive liner imprint in a finished tire is clear evidence of compromised component bonding that is highly likely to result in mechanical separation of the components when in service." Pl.'s Opp'n Ex. C 20.

Southwell's second theory is that the subject tire permitted too much air to permeate its components and therefore prematurely oxidized, thereby causing the tire to become brittle and weak. Pl.'s Opp'n Ex. C 23, 25, 38-39. In general, exposure of a tire's rubber components "to oxygen in sufficient concentration will, with time, [cause them to] undergo changes . . . that impact their physical and mechanical properties" and "inevitably reduce the overall durability of [the] tire, making it susceptible to component separation." Pl.'s Opp'n Ex. C 21. Internal components of a tire can come into contact with oxygen when air permeates through the "inner liner," which is situated between these components and a tire's "inner cavity." See Pl.'s Opp'n Ex. C 21.

Southwell opines that, here, the inner liner was too thin to prevent excessive oxidation. Pl.'s Opp'n Ex. C 22-23, 25, 38-39. Specifically, he asserts that the subject tire's inner liner varied from "1.6mm to 2.2mm, with an average of 1.8mm" and that "an average inner liner gauge of 1.8mm in a truck or bus tire is - regardless of compound - highly inadequate." Pl.'s Opp'n Ex. C 22. He also maintains that the subject's tire's inner liner gauge was below Defendants' own specifications and that "Hankook can provide no confirmation that they were regularly checking the inner liner gauge of cured tires." Pl.'s Opp'n Ex. C 22.

Southwell concludes, moreover, that "the subject tire exhibits clear signs of oxidation." Pl.'s Opp'n Ex. C 23. This conclusion is based on his tactile and visual inspection of the subject tire's physical properties. Pl.'s Opp'n Ex. C 23; Defs.' Br. Ex. E 95-98.

2. Southwell's Other Testimony

Southwell also opines on several other relevant matters.

First, Southwell considers and dismisses alternative explanations for the subject tire's failure. Specifically, he evaluates the chronological age of the subject tire, its load, inflation pressure, and speed, whether the subject tire was appropriate for the purposes for which it was used, whether there were cuts to the subject tire that could have led to its failure, whether an impact to the subject tire could have resulted in its

failure, and whether the subject tire suffered from "compression set," i.e., "the tendency of the material to fail to return entirely to its original size following a period of sustained compression." Pl.'s Opp'n Ex. C 25-29. In addition, Southwell concludes that service conditions did not contribute to the failure. Pl.'s Opp'n Ex. C 25-26, 29, 38. Finally, he bolsters his defect findings and undermines alternative explanations by pointing to "detachment textures" in the subject tire, i.e., polished areas indicative of long-term component separation. See Pl.'s Opp'n Ex. C 24.

Second, Southwell testifies to the sufficiency of Defendants' quality testing procedures. Pl.'s Opp'n Ex. C 30-36. This opinion involves several subparts. He first asserts that Defendants' own technical standards suggest awareness "of the importance of limiting the age of unassembled components in order to minimise the probability of producing a tire with poor adhesion." Pl.'s Opp'n Ex. C 30. However, he claims that Defendants "have been unable to provide production records to confirm that they actually had in place processes to detect and track compliance" with these standards. Pl.'s Opp'n Ex. C 30. He believes that such records "would in fact be kept for a period well in excess of the possible operating life of the tires . . . and [is] therefore surprised that they could not be produced." Pl.'s Opp'n Ex. C 30.

Another subpart contends that Defendants' quality testing regime in general was insufficient. Pl.'s Opp'n Ex. C 30-31. He reviews results of Defendants' testing and concludes that these results "can in no way be represented to indicate the manufactured durability level of the subject tire." Pl.'s Opp'n Ex. C 30-31. He observes that the "manufacturers with whom [he has] worked" employed more rigorous practices, and he determines that had Defendants adopted a "more stringent" testing program, "it would have been far more likely than not that the defects in the subject tire would have been detected." Pl.'s Opp'n Ex. C 31.

A third subpart evaluates Defendants' reliance on "indoor test wheel durability testing." Pl.'s Opp'n Ex. C 31-34. Southwell explains that regulations require durability testing but that the tests they require are useful for examining "design durability" or "manufactured short-term durability," not "long term structural integrity." See Pl.'s Opp'n Ex. C 32-34. He asserts that, during his time in the industry, tire production lots that had "easily passed the legislated minimum requirement" contained a "significant portion of tires" that "failed in service," and he claims that several tires have been recalled despite passing the required tests. Pl.'s Opp'n Ex. C 33-34. Furthermore, he notes that the manufacturers with whom he has worked never "relied solely on these tests as an indicator of market suitability." Pl.'s Opp'n Ex. C 33. He maintains that

Defendants "relied solely on wheel test data" and that "if more thorough, longitudinal monitoring processes were in place, and the results used appropriately, (a) the [test] data would have been retained, and (b) it is far more likely than not that the defects in the subject tire would have been avoided." Pl.'s Opp'n Ex. C 34.

A fourth subpart claims that Defendants did not test enough tires to ensure statistical effectiveness. Pl.'s Opp'n Ex. C 35-36. He asserts that the size of a production run only has a small impact on the number of tires that must be tested to detect durability problems. Pl.'s Opp'n Ex. C 35. He observes that the 425/65 R22.5 TH08 seems to have been a low volume product, based on the North American sales data provided by Defendants. See Pl.'s Opp'n Ex. C 35-36. Accordingly, he indicates that a fairly large proportion would need to be evaluated for testing to be statistically sufficient to find defects. See Pl.'s Opp'n Ex. C 35-36. He then performs an illustrative statistical analysis, relying on the sales data, to demonstrate his conclusion (i.e., assuming a 5% proportion of defective tires, a sample of 70 out of 1325 tires would need to be tested "to achieve results that are accurate to within 5%," and reducing the sample to just 2 tires would create results only "accurate to within 24%"). See Pl.'s Opp'n Ex. C 36. After reviewing the testing-related information shared by Defendants, he concludes that Defendants' testing regime "was highly unlikely to be effective

in detecting either of the manufacturing defects" at issue here, as they "simply did not test samples from their production often enough." See Pl.'s Opp'n Ex. C 30-31, 36.

3. Southwell's Other Documents

In addition to his report and deposition testimony, Southwell has submitted two other documents worth mentioning.

First, Southwell authored a rebuttal report, which responds to the opinion of Defendants' expert Joseph Grant. Pl.'s Opp'n Ex. AA 1-9. In response to Grant, Southwell further substantiates his own opinions and offers commentary on the articles upon which Grant relies. Pl.'s Opp'n Ex. AA 4-16.

Second, Southwell executed a declaration on November 5, 2017 that largely responds to Defendants' arguments in support of the motion to exclude his testimony. See Pl.'s Opp'n Ex. T. It contains a fair amount of new information, such as details about Southwell's work experience and qualifications as well as a tire study conducted at Bridgestone. See Pl.'s Opp'n Ex. T 1-12.

4. Southwell's Qualifications

Southwell has spent several decades in the business of inspecting, studying, analyzing, and recommending improvements to tires. See Pl.'s Opp'n Ex. C 4-5, 77-79. For example, he worked for Bridgestone Australia from 1987 to 1999 and, while there, "[t]est[ed] new and revised truck tire designs," "[i]nspect[ed] hundreds of tires

each year to determine reasons for removal [and] propose and implement countermeasures," "[c]onduct[ed] and analyse[d] large-scale longitudinal surveys of truck tires," "contribute[d] to the design of new truck tires," "[p]rovide[d] training and advice on truck tire inspection and maintenance practices," had "responsibility for all Bridgestone tire technical matters within SA/NT," served as "Director of the Tire and Rim Association of Australia," which "formulates and publishes engineering standards for the design, manufacture and fitment of [tires]," "prepare[d] compound and construction specifications for new and revised products," "plan[ned] and manage[d] new product development programmes," and "design[ed] and conduct[ed] extensive field trials to assess/confirm suitability of new products and/or specification changes," among other things. Pl.'s Opp'n Ex. C 4-5, 77-79.

After leaving Bridgestone, Southwell served as the proprietor of "The Tyreman" from 1999 to 2000. Pl.'s Opp'n Ex. C 5, 77. In this position, he sold truck tires, provided "inspection and maintenance services," and acted as an "[i]ndependent consultant to transport and tire industry bodies on a range of tire quality and maintenance matters." Pl.'s Opp'n Ex. C 5.

From 2001 to 2004, Southwell worked as Technical Manager for Bridgestone Corporation of Japan. There, he implemented in various regions "the tire technical service procedures [he] developed"

previously and trained "Bridgestone and other staff" from various regions on, inter alia, "tire design, development and production processes," "production quality systems," "tire materials," "assessment of tire designs for market suitability," "international regulations, design standards & test methods," and "tire performance monitoring and measurement." Pl.'s Opp'n Ex. C 5, 77.

Southwell next worked as New Product Manager for South Pacific Tires, a "[m]anufacturer of Goodyear, Dunlop and related brands," from 2004 to 2005. Pl.'s Opp'n Ex. C 77. In this role, he had "[r]esponsibility for new product design and development processes," "[m]anag[ed] indoor and outdoor tire test activities," "[r]ecomme[n]d[ed] and implement[ed] construction and compound specifications," and "[e]nsur[ed] product compliance with all necessary legislative requirements." Pl.'s Opp'n Ex. C 77.

Lastly, from 2005 to the present, Southwell has served as an "[i]ndependent tire industry consultant and failure analyst," providing services to "manufacturers, importers, Government and industry bodies, lawyers, insurers etc." Pl.'s Opp'n Ex. C 5.

Southwell additionally possesses a variety of relevant educational credentials. For example, he studied at "Firestone University," where he learned about "[t]ire design factors," "[p]erformance measurement and analysis," "[c]onstruction," "[c]ompounding," etc. Pl.'s Opp'n Ex. C 76. Likewise, he received

training from the Stahlgruber Foundation in, inter alia, "[r]epair failure analysis" and "[d]amage and failure modes." Pl.'s Opp'n Ex. C 76. He also has a Master of Engineering degree, a Bachelor of Management degree, and a trade certificate in automotive mechanics. Pl.'s Opp'n Ex. C 76.

II. STANDARDS GOVERNING ADMISSION OF EXPERT EVIDENCE

Admission of expert testimony is governed by Federal Rule of Evidence 702, which states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

The prevailing standards applicable to Rule 702 were set forth in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). As the Fourth Circuit has explained, "[i]mplicit in the text of Rule 702, the Daubert Court concluded, is a district court's gatekeeping responsibility to 'ensur[e] that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.'" Nease v. Ford Motor Co., 848 F.3d 219, 229 (4th Cir. 2017) (quoting Daubert,

509 U.S. at 597). These dual inquiries have been described in the following way:

Relevant evidence . . . helps "the trier of fact to understand the evidence or to determine a fact in issue." To be relevant under Daubert, the proposed expert testimony must have "a valid scientific connection to the pertinent inquiry as a precondition to admissibility."

With respect to reliability, the district court must ensure that the proffered expert opinion is "based on scientific, technical, or other specialized knowledge and not on belief or speculation, and inferences must be derived using scientific or other valid methods."

Id. (citations omitted).

To guide the reliability inquiry, "Daubert offered a number of guideposts." Nease, 848 F.3d at 229. These include: "whether the expert witness' theory or technique: (1) 'can be or has been tested'; (2) 'has been subjected to peer review and publication'; (3) 'has a high known or potential rate of error'; and (4) is generally accepted 'within a relevant scientific community.'" Bresler v. Wilmington Trust Co., 855 F.3d 178, 195 (4th Cir. 2017) (citations omitted); see also Nease, 848 F.3d at 229. This checklist is not exhaustive, Lee v. City of Richmond, 3:12-cv-471, 2014 WL 5092715, at *3 (E.D. Va. Sept. 30, 2014), and another factor often useful to consider is "whether an expert has accounted for obvious alternative explanations," Roche v. Lincoln Prop. Co., 278 F. Supp. 2d 744, 749 (E.D. Va. 2003); see also Oglesby v. Gen. Motors Corp., 190 F.3d 244,

250-51 (4th Cir. 1999) (upholding exclusion of an expert in part because he "could not eliminate other equally plausible causes").

The Supreme Court further defined the contours and applicability of the Daubert framework in Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999). As this Court has explained:

In Kumho, the Supreme Court applied the basic principles that animated its decision in Daubert to testimony that is not scientific in nature but rather based on the expert's knowledge and experience. In Kumho, the Court held that the gatekeeping responsibility, to assure the reliability and relevance of expert testimony, applies with equal force to non-scientific evidence and, indeed, to all expert testimony. To that end, the Court, in Kumho, held that the factors outlined in Daubert can be pertinent to the gatekeeping function. The Court made clear also that those factors constitute a non-exclusive recitation of matters to be considered in determining the reliability of expert testimony.

Lee, 2014 WL 5092715, at *3 (citations omitted). Indeed, the Kumho court specifically noted that "the test of reliability is 'flexible,' and Daubert's list of specific factors neither necessarily nor exclusively applies to all experts or in every case." Kumho, 526 U.S. at 141. In the end, the purpose of a court's gatekeeping function is simply "to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." Id. at 152.

The Fourth Circuit has offered additional guidance as to how the Daubert analysis should be implemented in light of Kumho:

A district court's reliability determination does not exist in a vacuum, as there exist meaningful differences in how reliability must be examined with respect to expert testimony that is primarily experiential in nature as opposed to scientific. Purely scientific testimony, for example, is characterized by "its falsifiability, or refutability, or testability." Thus, such evidence is "objectively verifiable, and subject to the expectations of falsifiability, peer review, and publication."

Experiential expert testimony, on the other hand, does not "rely on anything like a scientific method." . . . While a district court's task in examining the reliability of experiential expert testimony is therefore somewhat more opaque, the district court must nonetheless require an experiential witness to "explain how [his] experience leads to the conclusion reached, why [his] experience is a sufficient basis for the opinion, and how [his] experience is reliably applied to the facts."

United States v. Wilson, 484 F.3d 267, 274 (4th Cir. 2007) (emphasis added) (citations omitted). In short, experiential and scientific experts may be assessed differently, although the basic gatekeeping requirement is the same. See id.; Lee, 2014 WL 5092715, at *3.

The Fourth Circuit has cautioned, however, Wilson and Kumho notwithstanding, that the Daubert factors are often of critical importance in products liability cases:

"[A] plaintiff may not prevail in a products liability case by relying on the opinion of an expert unsupported by any evidence

such as test data or relevant literature in the field.” Oglesby, 190 F.3d at 249. “A reliable expert opinion must [not] be based . . . on belief or speculation.” Id. at 250. One especially important factor for guiding a court in its reliability determination is whether a given theory has been tested.

See Nease, 848 F.3d at 231. Thus, in Nease, a vehicle design defect case, the court reversed the district court’s ruling that every argument for exclusion of an expert’s testimony went to weight, not admissibility, and then rejected the expert’s opinion under the Daubert factors. Id. at 222, 230–32. Nevertheless, the Fourth Circuit has consistently acknowledged that “Daubert is a flexible test and no single factor, even testing, is dispositive.” Id. at 232; see also Oglesby, 190 F.3d at 249 (“But at bottom, the court’s evaluation is always a flexible one, and the court’s conclusions necessarily amount to an exercise of broad discretion guided by the overarching criteria of relevance and reliability.”).

Rule 702 also requires courts to examine an expert’s qualifications. As this Court has explained:

In evaluating a proffered expert’s qualifications, “[t]he trial court ha[s] to decide whether this particular expert ha[s] sufficient specialized knowledge to assist the jurors in deciding the particular issues in the case.” Daubert requires that the expert possess expertise assessed in the context of the “nature of the issue, the expert’s particular expertise, and the subject of his [or her] testimony.” One knowledgeable about a particular subject need not be precisely informed about all details of issues raised in

order to offer an opinion as an expert. An imperfect fit between the expert's knowledge and experience and the issues before the court impacts the weight given to the expert's testimony, not its admissibility. However, "[w]here a purported expert witness has neither satisfactory knowledge, skill, experience, training nor education on the issue for which the opinion is proffered, that witness's testimony may be excluded."

Radiance Found., Inc. v. NAACP, 27 F. Supp. 3d 671, 674 (E.D. Va. 2013) (citations omitted).

III. PRELIMINARY COMMENT: SOUTHWELL'S DECLARATION

The parties are advised that this Memorandum Opinion does not rely on Southwell's declaration. Defendants have challenged that declaration on the grounds that it was submitted after the expert disclosure deadlines and that it is not proper "supplementation" under Federal Rule of Civil Procedure 26(e). Defs.' Reply Br. 1-4. It is also the subject of a motion in limine. Defs.' Mot. in Limine to Exclude Decl. of David Southwell 1.

The Court declines to rule on that issue in this Opinion. However, it also does not rely on the declaration because such reliance is entirely unnecessary; Southwell's opinions are admissible even without the declaration.

IV. DISCUSSION

Defendants argue that several aspects of Southwell's testimony cannot withstand Daubert scrutiny. Specifically, they contest his

liner imprint opinion, his oxidation opinion, his opinions as to Defendants' testing practices, and his opinions based on Defendants' failure to retain documents. See Defs.' Br. 17-26. They further maintain that Southwell fails to consider alternative explanations for the subject tire's failure. Defs.' Br. 26-29. Finally, they assert that Southwell does not address the tire manufacturing standard of care and is not qualified to testify as to this issue. Defs.' Br. 29-30.

A. Liner Imprints

Defendants' first argument is that Southwell's opinion that liner imprint marks suggest poor adhesion is unreliable. See Defs.' Br. 17-20. This argument fails.

As an initial matter, the Court adopts the following analytical framework. Given that Nease advises that the Daubert factors should be considered in products liability cases, see Nease, 848 F.3d at 231, the Court first discusses these factors. Given the "experiential witness" test, see Wilson, 484 F.3d at 274, and the fact that the relevant authorities indicate that "the test of reliability is 'flexible,'" see Kumho, 526 U.S. at 141; see also Nease, 848 F.3d at 232, the Court then explores additional considerations.

The first Daubert factor, testing, favors Benedict. It is true that Southwell cannot identify any public testing of his theory or recall having documentation of testing he conducted. Defs.' Br. Ex.

E 80-82. However, it is apparent from the record that testing of this theory was performed at Bridgestone during Southwell's tenure. Defs.' Br. Ex. E 81-87; see also Pl.'s Opp'n Ex. AA 5. This testing, furthermore, followed an "investigation process involving cutting up multiple tires . . . cutting up recent production tires, doing some wheel durability testing, doing pull testing, [and] investigating a whole range of variables in the production plant," and it showed that "liner imprint was visible in the great majority of" tires analyzed that had component separations. See Defs.' Br. Ex. E 82-85. Southwell can knowledgably rely on this testing, moreover, given that he was one of five or six people associated with it. See Defs.' Br. Ex. E 85. And the liner pattern theory was, according to Southwell, part of a training course that he taught at Bridgestone, see Defs.' Br. Ex. E 87, and use in a training course is an indicator of reliability.¹ Finally, although Southwell does not provide documentation of the Bridgestone testing, this is a matter that goes to the weight of Southwell's testimony, not its reliability. See Defs.' Br. Ex. E 81-82.²

¹ Southwell also reports that he "saw many internal documents [at Bridgestone] that referred to the ominous significance of liner pattern marks in failed tires." Pl.'s Opp'n Ex. AA 5. However, Benedict has not shown how this statement can be considered, so it is not a basis for this Opinion.

² There is also nothing in the record to explain why Defendants did not subpoena the documents.

The second factor, peer review and publication, is neutral. On one hand, there are very few citations in the section of Southwell's report discussing the role of liner imprints in evaluating adhesion problems. See Pl.'s Opp'n Ex. C 18-20. And, those that do appear support his theory by inference. See Pl.'s Opp'n Ex. C 18-20. Additionally, in Cooper Tire & Rubber Co. v. Mendez, the court did examine and find wanting a book by Rex Grogan, which is one of the sources upon which Southwell relies in his rebuttal report to more directly support his liner pattern theory. See Cooper Tire & Rubber Co. v. Mendez, 204 S.W.3d 797, 801-02 (Tex. 2006); Pl.'s Opp'n Ex. AA 5. Lastly, Southwell concedes that he is not aware of any publicly available testing of his theory. Defs.' Br. Ex. E 80-81.

On the other hand, however, Southwell's report includes many published academic and industry sources to substantiate the conceptual bases of the liner imprint theory. Pl.'s Opp'n Ex. C 15-16, 19-20. Nothing in Mendez, moreover, is controlling here. Furthermore, the Mendez decision notwithstanding, Southwell offers additional, less inferential support for his liner imprint theory in his rebuttal report, including a source that, according to Southwell, is relied upon by Defendants' tire expert. See Pl.'s Opp'n Ex. AA 5.

In short, this factor does not support admission of Southwell's testimony but neither is it fatal to it.

The third factor, the error rate and standards for controlling the technique, favors Benedict. Defendants are correct that Southwell does not quantify how much liner pattern visibility is necessary to be "pervasive," i.e., "highly likely to result in mechanical separation." See Defs.' Br. 18; Defs.' Br. Ex. E 79-80. Rather, to him, pervasive means "widespread." Defs.' Br. Ex. E 79.

Nevertheless, Southwell's testimony does contain sufficient detail to satisfy this factor. For example, he explains that "three or four fingernail-sized areas of liner imprint distributed around a tire" would likely not be problematic but that he would be "concerned" if he saw more liner imprint. Defs.' Br. Ex. E 78-79; see also Pl.'s Opp'n Ex. C 20 ("Small areas of poorly bonded interfaces rarely present problems in the finished tire."). He also adds explanation to his "pervasive" and "widespread" terminology, stating that "an isolated area [i.e., a non-pervasive area, of liner imprint], by its nature, is significantly displaced from other areas." Defs.' Br. Ex. E 80. Here, these principles not only guide Southwell's technique, but they also teach that the potential for error is quite low. This is because Southwell has identified numerous liner pattern marks throughout the subject tire at the precise layer where he posits "the catastrophic failure commenced." See Pl.'s Opp'n Ex. C 8, 17, 40-42.

In addition, Southwell acknowledges that there are

circumstances in which his theory offers less accurate results. Specifically, he recognizes that pervasive liner imprint marks might not coincide with a tire failure where "a tire is used in a far less demanding operation," such as "if the subject tire had been fitted to a crane . . . where the speed is very low or . . . the mileage is very low." Defs.' Br. Ex. E 79. He also notes that the probability of a failure occurring "is dependent on a number of factors, including the degree to which the bond is compromised, the relative area of the compromised bond, and the service conditions of the tire." Pl.'s Opp'n Ex. C 20. Again, these statements teach that the potential for error here is likely low (in addition to providing useful guidance for applying his technique), for two reasons. First, the subject tire did not face abnormally mild service conditions³ but rather had "covered approximately 10,000 miles" in the 7 months before the accident and had a tread depth roughly 53% worn. Pl.'s Opp'n Ex. C 6, 8. Second, the compromised bond area appears large, given the extent of liner imprint detected. See Pl.'s Opp'n Ex. C 17, 20, 40-42.

On this record, it is clear that, although Southwell's theory may not be as error tested as Defendants would like, it is guided by specific standards and does not seem prone to an impermissibly high rate of error. This factor hence counsels in favor of admission.

The final factor, general acceptance, also tends to support

³ Defendants agree. See Defs.' Br. 22, 28-29.

Benedict. On one hand, as noted above, little publicly available research on the liner pattern theory has been cited. Further, Defendants offer sources that, at minimum, suggest a lack of undisputed acceptance. See Defs.' Br. 17-18; Defs.' Br. Ex. J 1 ("The appearance of . . . liner marks has been and continues to be an issue of contention in the realm of forensic tire analysis."); see also Pl.'s Opp'n Ex. AA 4.

On the other hand, theories similar to Southwell's have been presented in other tire defect cases, indicating fairly common acceptance, having been subject to the rigors of litigation. See, e.g., Johnson v. Hankook Tire Mfg., Co., 2:09-cv-113, 2012 WL 12929510, at *2-5 (N.D. Miss. Mar. 14, 2012); Ramirez v. Michelin N. Am., Inc., SA-07-CA-1032, 2010 WL 11506556, at *7-8 (W.D. Tex. Feb. 18, 2010). In fact, one court even characterized such an opinion as based on the expert's "familiarity with practices enjoying wide acceptance in the tire industry." Ramirez, 2010 WL 11506556, at *7-8.

Accordingly, this factor favors Benedict because, although Southwell's theory is disputed, it also is commonly accepted.

Applying the Daubert factors, then, Benedict prevails. But the inquiry does not end there, see Kumho, 526 U.S. at 141, 152; Lee, 2014 WL 5092715, at *3, and additional factors further counsel in favor of admission. First, as noted above, the reliability test for an expert qualified by experience is whether he can "explain how [his]

experience leads to the conclusion reached, why [his] experience is a sufficient basis for the opinion, and how [his] experience is reliably applied to the facts." Wilson, 484 F.3d at 274 (citations omitted). Southwell, an individual whose theory and expertise are largely based on his industry experience, see Defs.'s Br. Ex. E 81-87; Pl.'s Opp'n Ex. C 4-5, 15, 77-79; Pl.'s Opp'n Ex. AA 5, has done that. He describes his theory in substantial detail, how it functions, its basis, and how it applies and supports his conclusions in this case. See Defs.'s Br. Ex. E 77-87, 90; Pl.'s Opp'n Ex. C 11-20, 25, 38-42; Pl.'s Opp'n Ex. U 73-77, 90; Pl.'s Opp'n Ex. AA 5.

Second, other federal courts have addressed the liner pattern theory at issue here, and many have admitted it. See Cone v. Hankook Tire Co., 14-1122, 2017 WL 238448, at *4-5 (E.D. Tenn. Jan. 19, 2017); Martin v. China Mfrs. Alliance, LLC, 11-cv-0711, 2013 WL 12049095, at *3 (S.D. Ill. Apr. 8, 2013); Johnson, 2012 WL 12929510, at *2-5; Ramirez, 2010 WL 11506556, at *7-8. But see Kehler v. Bridgestone Ams. Tire Operations, LLC, 15-cv-127, 2016 WL 8316771, at *6 (D. Wyo. Dec. 1, 2016); Beauregard v. Cont'l Tire N. Am., Inc., 695 F. Supp. 2d 1344, 1351-53 (M.D. Fla. 2010), aff'd, 435 F. App'x 877 (11th Cir. 2011). Indeed, in one of those cases, HTCL sought to exclude Southwell's testimony about liner imprints using much the same arguments as presented here, and HTCL's challenge was rebuffed. See

Cone, 2017 WL 238448, at *4-5.⁴ The Court is attentive to the thoughtful assessments of its sister courts, especially those that have faced the precise question under consideration, and it regards them as yet another factor in favor of admission.⁵

In sum, Daubert, Wilson, and the wisdom of sister courts all on balance indicate that Southwell's liner imprint theory should be admitted. The Court thus denied Defendants' motion as to this issue.

B. Inner Liner Gauge and Oxidation

Defendants also argue that Southwell's opinion that the inner liner gauge was too thin to prevent oxidation is unreliable. See Defs.' Br. 20-21. Its contentions are unavailing.⁶

⁴ The similarities between Cone and this case are actually even more extensive. As here, Cone involved a concrete mixer truck that overturned when a steer "tire manufactured by Hankook suffered a tread separation." See Cone, 2017 WL 238448, at *1, 2 n.2.

⁵ Defendants assert that Southwell's liner imprint theory has been rejected by the Australian Coroner's Court. Defs.' Br. 10. However, nothing in the proffered excerpt of that court's opinion suggests that it was applying a Daubert-like standard. See Defs.' Br. Ex. F 22-23. Rather, it seems to have been making factual findings based on the evidence. See Defs.' Br. Ex. F 23 ("I am satisfied that the examination . . . do [sic] not show evidence of any design or manufacturing defect"). Indeed, Southwell's position was rejected because other experts' opinions were deemed "more credible." Defs.' Br. Ex. F 22-23. As this Court has made clear, "the exercise of a district court's gate-keeping role should not transform a Daubert hearing into a trial on the merits." United States v. Aman, 748 F. Supp. 2d 531, 534 (E.D. Va. 2010). Accordingly, a decision by the Coroner's Court when acting as factfinder offers little guidance as to what this Court should do when acting as gatekeeper.

⁶ The Court follows here the same analytical framework it employed

The first Daubert factor, testing, favors Benedict. Defendants are correct that Southwell has not performed testing of the subject tire or measured the extent of oxidation degradation he detected other than through physical inspection. See Defs.' Br. 20-21; Defs.' Br. Ex. E 96-97; Pl.'s Opp'n Ex. C 23. And they are likewise correct that he has not measured expected oxidation. See Defs.' Br. 20-21; Pl.'s Opp'n Ex. C 23. That does not mean, however, that Southwell's theory cannot be, or has never been, tested.

Southwell's inner liner gauge theory has been tested and is eminently testable. Southwell provides a specific numerical measurement for when an inner liner is too thin to prevent excessive air permeation, supported by his own industry experience and academic research. Pl.'s Opp'n Ex. C 22; Defs.' Br. Ex. E 120-22. He details, moreover, how, where, and how frequently he measured the inner liner in the subject tire to determine that this inner liner was inadequate. Pl.'s Opp'n Ex. U 101-09. He also highlights Defendants' inner liner specification documents, which teach, at minimum, that the proper inner liner gauge has been researched and could be tested. See Pl.'s Opp'n Ex. C 22. This point is corroborated, furthermore, by Defendants' own corporate designee, who agrees that the possibility of air permeation into a tire "would of course go up" if the inner liner were too thin. See Pl.'s Opp'n Ex. D 155-56. Finally, Southwell

in examining Southwell's liner imprint theory.

cites tire recalls where the defect was "insufficient tire liner gauge," which again supports the view that the appropriate liner gauge has been and could be tested. See Pl.'s Opp'n Ex. C 23.

Southwell's opinion that oxidation contributed to the subject tire's failure and that he could detect this oxidation by way of physical inspection is also testable and has been tested. Southwell explains, for instance, that "experienced tire inspectors who have had sufficient exposure to relevant product development programmes are often able to detect subtle signs of oxidation," which shows that the methodology of physical inspection has been tested and that other experts could evaluate Southwell's conclusions. See Pl.'s Opp'n Ex. C 23; see also Defs.' Br. Ex. E 95-97. This point is confirmed by Cone and Stallings v. Michelin Americas Research & Development Corp., in which courts admitted expert evidence of oxidation based on physical inspection. See Cone, 2017 WL 238448, at *7-8; Stallings v. Michelin Ams. Research & Dev. Corp., 1:07-cv-2497, 2010 WL 966865, at *4 (N.D. Ga. Mar. 12, 2010). Southwell also cites multiple sources in support of the proposition that oxidation increases the likelihood of tire failure and changes the physical characteristics of rubber, thereby indicating that the effects of oxidation on rubber have been extensively examined and that using a physical inspection to detect these effects is feasible and testable. See Pl.'s Opp'n Ex. C 22-23. Finally, Southwell describes precisely the characteristics he

observes in the subject tire that evince oxidation and provides inspection notes detailing where in the subject tire he finds these characteristics; thus, other analysts could easily scrutinize his results. See Pl.'s Opp'n Ex. C 23, 25, 38-42; Defs.' Br. Ex. E 97-98.

The second factor, peer review and publication, also supports Benedict. Southwell proffers many published sources discussing the physical effects of oxidation on rubber and tires and the impact of inner liner gauge on air permeability. Pl.'s Opp'n Ex. C 21-23. Given Southwell's citations to these materials, his theory and methodology seem reasonable and supported by the literature.

The third factor, the relevant error rate and standards governing the technique, is neutral or slightly favors Benedict. Defendants are correct that Southwell has not measured the oxidation degradation in the subject tire, notwithstanding the fact that there are ways of quantifying oxidation. See Defs.' Br. 20-21; Defs.' Br. Ex. E 96-97; Pl.'s Opp'n Ex. C 23. More importantly, Southwell provides little information as to the amount of oxidation required to reflect a likelihood of tire failure. See Pl.'s Opp'n Ex. C 21-23, 25, 38-39. Rather, he simply observes that the subject tire "exhibits clear signs of oxidation" and then concludes that oxidation was a cause of its failure. See Pl.'s Opp'n Ex. C 23, 25, 38-39.

Nevertheless, Southwell does offer specifics that guide his technique and demonstrate a low likelihood of error here. First, he

establishes a minimum inner liner width that is sufficient to ensure adequate impermeability, and he indicates that the average measurement in the subject tire fell below both this minimum and Defendants' specifications. Pl.'s Opp'n Ex. C 22; Pl.'s Opp'n Ex. U 107-08, 121. Second, he describes the physical characteristics that are reflective of oxidation, and he detects these characteristics at many locations in the subject tire and specifically at the layer where he believes the failure occurred. See Pl.'s Opp'n Ex. C 8, 23, 25, 38-42. Third, Southwell acknowledges that "ambient temperature," "[i]nflation pressure," and "operating temperature" can affect the degree of oxidation, but he explains why these factors actually support his findings. See Defs.' Br. Ex. E 99; Pl.'s Opp'n Ex. C 25-26; Pl.'s Opp'n Ex. AA 9.

In sum, Southwell's theory is not devoid of specifics or likely to have an exceedingly high rate of error as applied here. This factor is thus largely neutral or slightly in Benedict's favor.

The fourth factor, general acceptance, favors Benedict. It is true that the proper inner liner gauge and how it should be measured are disputed. Compare Defs.' Br. 10-11, 11 n.2, 20, with Pl.'s Opp'n 18-19. This point notwithstanding, Southwell cites many sources to substantiate the various facets of his theory. Pl.'s Opp'n Ex. C 21-23. Furthermore, he makes it clear that his general theory is well understood by the industry and that experienced tire inspectors are

"often" able to detect oxidation by physical inspection. See Pl.'s Opp'n Ex. C 21-23; Defs.' Br. Ex. E 120-22. His suggestion as to the general acceptance of his methodology is corroborated, moreover, by Defendants' own expert, who has asserted that physical inspection is the accepted method of determining the cause of a tire failure. See Pl.'s Opp'n Ex. Y 171-73, 189-90. Finally, as noted above, the Cone and Stallings courts admitted testimony of experts who analyzed oxidation by physical inspection, further indicating that Southwell's theory and methodology are common. See Cone, 2017 WL 238448, at *7-8; Stallings, 2010 WL 966865, at *4. In short, there seems to be fairly broad support for Southwell's theory and methods.

Benedict therefore prevails under Daubert. As above, moreover, this is not the end of the analysis.

First, Southwell certainly satisfies the Wilson standard. As with his liner imprint opinion, he describes his relevant experience, ways in which his experience informs his theories and methods, how his theories and methods function, and how his theories and methods apply to the facts of this case. See Defs.' Br. Ex. E 96-99, 120-22; Pl.'s Opp'n Ex. C 21-23, 25, 38-42; Pl.'s Opp'n Ex. U 101-09. Southwell has therefore demonstrated "how [his] experience leads to the conclusion reached, why [his] experience is a sufficient basis for the opinion, and how [his] experience is reliably applied to the facts." See Wilson, 484 F.3d at 274 (citations omitted).

Second, as explained above, other federal courts have admitted analogous theories of oxidative degradation. See Cone, 2017 WL 238448, at *7-8; Johnson, 2012 WL 12929510, at *2, 5; Stallings, 2010 WL 966865, at *4; Ramirez, 2010 WL 11506556, at *1, 4, 6. These decisions further counsel in favor of admission.

In sum, Southwell's inner liner and oxidation opinion is sufficiently reliable to be admitted. The Court hence denied Defendants' motion as to this issue.

C. Testing

Defendants also challenge Southwell's opinion about Defendants' testing regime. This challenge is unsuccessful.

As an initial matter, nothing in Federal Rule of Evidence 702 indicates that Southwell cannot testify as to this issue. His testing opinion, even more than his liner imprint and oxidation analyses, is an "experiential opinion," given that testimony by a tire industry participant about the types of testing utilized in the industry and the effectiveness of different testing regimes is inherently based on experience. And the Daubert factors are not especially useful for determining the reliability of such an opinion. Thus, the proper standard is that of Wilson.⁷

⁷ The only possible exception is Southwell's brief statistical analysis concerning adequate sampling for quality tests. See Pl.'s Opp'n Ex. C 35-36. Defendants do not challenge this aspect of his opinion in their motion. And, in any case, nothing suggests that

Southwell certainly meets this standard. See Wilson, 484 F.3d at 274. He has substantial industry experience in evaluating how and why tires fail, implementing countermeasures, training others in tire inspection practices and production quality systems, managing tire testing programs, ensuring compliance with legislative requirements, and promulgating manufacturing standards. See Pl.'s Opp'n Ex. C 4-5, 77-79. And, moreover, he describes in detail, based on his direct experience with and knowledge of different forms of testing as well as the information he was provided by Defendants and other sources, why Defendants' testing practices were insufficient to detect and prevent the alleged defects in the subject tire. See Pl.'s Opp'n Ex. C 30-36; Defs.' Br. Ex. E 143-44.⁸

Defendants' primary argument as to why Southwell's testing opinion should be excluded rests on products liability law.

Southwell's basic statistical calculations are unsound (the math was performed by an Australian government website). See Pl.'s Opp'n Ex. C 36. Moreover, although Southwell's analysis relies on certain assumptions, it appears to be merely an illustrative exercise in support of his broader points that a large proportion of 425/65 R22.5 TH08 tires would need to be tested to detect defects and that, based on Defendants' testing information and his experience and understanding of the industry, Defendants' testing regime was insufficient to catch the defects alleged here. See Pl.'s Opp'n Ex. C 30-36.

⁸ Kehler, cited by Defendants, is not to the contrary. See Defs.' Reply Br. 13. There, the court excluded an expert's opinion that a communication disconnect between manufacturers and dealers existed based on his surveying six out of hundreds or thousands of tire dealers. Kehler, 2016 WL 8316771, at *3. The opinion excluded was not, as here, one derived from vast industry experience. See id.

Specifically, they claim that this body of law would reject Southwell's "industry standards" opinion because Defendants complied with federal standards and because his testimony is based only on experience with two manufacturers. Defs.' Br. 23-26.⁹

Products liability law, however, does not necessitate excluding Southwell's testimony. First, to establish liability for an allegedly defective product, a plaintiff need only show a violation of "(1) a government standard, (2) an industry standard, or (3) the reasonable expectations of consumers." Norris v. Excel Indus., Inc., 139 F. Supp. 3d 742, 747-48 (W.D. Va. 2015); see also Alevromagiros v. Hechinger Co., 993 F.2d 417, 422 (4th Cir. 1993). Defendants' alleged compliance with a government standard, therefore, does not, as discussed further in the Court's opinion denying Defendants' motion for summary judgment, insulate them from expert scrutiny. (ECF No. 343).

Second, the cases Defendants cite do not require exclusion of Southwell's otherwise admissible testimony. In Norris, the court

⁹ Defendants also vaguely point to Federal Rule of Evidence 403, in an apparent effort to argue that Southwell's testimony will mislead the jury into believing that the practices of his employers define the industry standard. See Defs.' Br. 26; see also Fed. R. Evid. 403. As discussed in this Court's Opinion as to Defendants' motion for summary judgment, Southwell is not attempting to define the industry standard. (ECF No. 343). The Court finds, moreover, that his testimony is relevant to the products liability inquiry, see supra note 13, and that there is little risk of a jury misunderstanding its purpose.

held that that expert testimony could not defeat summary judgment. Norris, 139 F. Supp. 3d at 754. In Alevromagiros, likewise, the Fourth Circuit affirmed a directed verdict and held that an expert's opinion was not enough to sustain the plaintiff's claim. Alevromagiros, 993 F.2d at 420-22. It is true that the court affirmed the district court's exercise of discretion in excluding a competitor's ladder (and testimony about it) as evidence of an industry-wide standard. Id. at 421-22. But this case is in no way analogous. Southwell is an expert who is testifying based on his considerable industry experience, not some competing product offered to establish a greater trend. See Pl.'s Opp'n Ex. C 4-5, 30-36, 76-79.

Third, to the extent that these cases do offer a conceptual basis for excluding Southwell's opinion, cf. Hartnett v. Globe Firefighter Suits, Inc., 155 F.3d 559, at *1-2 (4th Cir. June 29, 1998) (per curiam) (table), his testimony satisfies the standards imposed by them. This issue is addressed in detail in the decision denying Defendants' motion for summary judgment. (ECF No. 343).

Accordingly, the Court denied Defendants' motion as to Southwell's testing opinion.

D. Document Retention

Defendants assert that Southwell is not permitted to draw adverse inferences from the fact that Defendants did not retain documents relating to the subject tire. See Defs.' Br. 23; Defs.'

Reply Br. 13-14. Defendants' arguments are largely correct.

Numerous statements by Southwell suggest that he reached certain conclusions based on the fact that Defendants could not produce or did not retain documents. See, e.g., Pl.'s Opp'n Ex. C 34 ("[I]f more thorough, longitudinal monitoring processes were in place, and the results used appropriately, (a) the data would have been retained"); see also Pl.'s Opp'n Ex. C 22, 30; Pl.'s Opp'n Ex. U 137-39; Defs.' Br. Ex. E 122-23, 137-41.

However, Southwell is not an expert in document retention. He mentions that he is not familiar with tire companies' document retention policies as a general matter and that he was not even aware of whether there was one when he worked at Bridgestone. Defs.' Br. Ex. E 141. He does note that he is familiar with the Bridgestone and South Pacific Tires policies. Pl.'s Opp'n Ex. U 137-38. However, familiarity is not expertise. And Southwell's expertise is in such subjects as tire production, inspection, and analysis, not in determining whether a company should or should not retain documents or produce them in litigation. See Pl.'s Opp'n Ex. C 4-5, 76-79.

Furthermore, whether an adverse inference is appropriate is governed by specific legal standards. See Silvestri v. Gen. Motors Corp., 271 F.3d 583, 590-91 (4th Cir. 2001); Vodusek v. Bayliner Marine Corp., 71 F.3d 148, 155-56 (4th Cir. 1995); See E.I. Du Pont De Nemours & Co. v. Kolon Indus., Inc., 3:09-cv-58, 2011 WL 1597528,

at *9-12 (E.D. Va. Apr. 27, 2011). And it is not up to the parties or witnesses to decide, on their own, whether an adverse inference is warranted. See, e.g., E.I. Du Pont De Nemours, 2011 WL 1597528, at *9-12. Consequently, any adverse inferences drawn by Southwell are improper and thus excluded.¹⁰

There is one caveat, however. Southwell may discuss the absence of documents from Defendants to the extent that he is explaining that he has received no information from Defendants on a certain topic. He is permitted, therefore, to rely on the documents he has been given, acknowledge when these documents do not contradict his theories, and highlight where the available evidence runs out. See, e.g., Pl.'s Opp'n Ex. C 22 ("Hankook can provide no confirmation that they were regularly checking the inner liner gauge"). He is not authorized, however, to imply that Defendants should have kept these records or would have done so had they adopted certain practices (e.g., more rigorous testing procedures).

In sum, any true adverse inferences are excluded. Defendants' motion was, accordingly, granted to that limited extent.

E. Alternative Explanations

Defendants argue that Southwell's testimony should also be

¹⁰ To the extent that the documents referred to are electronically stored, Federal Rule of Civil Procedure 37(e) would govern the analysis. See Fed. R. Civ. P. 37(e). And Southwell cannot supplant that analysis.

rejected because he does not consider alternative explanations for the subject tire's failure. Specifically, they assert that Southwell has not sufficiently addressed impact damage, tire cuts, tire age and service conditions, or why the defect caused a failure "nearly nine years and thousands of miles" after production. Defs.' Br. 21-22, 26-29. These arguments are meritless because Southwell does evaluate each of those issues. Pl.'s Opp'n Ex. C 7-8, 24-29, 38-39; Pl.'s Opp'n Ex. AA 5-7. To the extent that Defendants deem Southwell's analysis of these alternative explanations inadequate, they may cross-examine him or introduce contradictory evidence.

Defendants' motion was thus denied as to this issue.

F. Tire Manufacturing Standard of Care

Defendants' final argument is that Southwell has not offered and is unqualified to provide an opinion on the tire manufacturing standard of care. Defs.' Br. 29-30.¹¹ They claim that: (1) Southwell never states a standard of care in his report; and (2) Southwell is unqualified because he has never been to a Hankook plant and has limited experience in manufacturing tires and the tire industry generally. Defs.' Br. 29-30. Defendants' contentions here are

¹¹ The standard of care referenced herein differs from the standard of care discussed in this Court's Opinion resolving Benedict's motion for partial summary judgment as to Defendants' contributory negligence defense. (ECF No. 341). There, the standard of care applicable to commercial truck drivers was at issue, whereas here the question involves the standard of care governing tire manufacturers.

unpersuasive and, indeed, border on frivolous.

First, the question of whether a party has presented adequate evidence of a standard of care goes to whether summary judgment is proper, not whether that party's expert should be excluded. Southwell's testimony, moreover, is sufficient under the governing legal standards to defeat summary judgment. (ECF No. 343).

Second, it is patently clear that Southwell is qualified to testify as to the manufacturing standard of care. He has spent several decades in the tire manufacturing industry and has worked at multiple prominent tire manufacturers. See Pl.'s Opp'n Ex. C 4-5, 77-79. Furthermore, as detailed above, he has extensive experience in tire production, design, testing, quality assurance, and failure analysis, and he has spent his entire career determining how manufacturers can prevent tires from failing, why tires fail when they do, and how to correct defects once they have been uncovered. See Pl.'s Opp'n Ex. C 4-5, 76-79. Indeed, it is hard to imagine an expert more qualified to testify to the tire manufacturing standard of care.¹²

Defendants' proffered authorities are not to the contrary because they all involved testimony about issues substantially

¹² Even if there were some slight "imperfect fit" between Southwell's "knowledge and experience and the issues before the court," such imperfection "impacts the weight given to the expert's testimony, not its admissibility." See Radiance Found., 27 F. Supp. 3d at 674.

attenuated from the expert's area of proficiency. In Garlinger v. Hardee's Food Systems, a thermodynamics expert was deemed unqualified to offer an opinion as to the reasonableness of serving coffee at a particular temperature because "he possesses no knowledge or experience in the food or beverage industry." Garlinger v. Hardee's Food Sys., 16 F. App'x 232, 236 (4th Cir. 2001). Likewise, in Anderson v. National Railroad Passenger Corp., the court rejected experts who were "eminently qualified in a number of railroad related areas" but had no experience related to railroad dispatch systems. Anderson v. Nat'l R.R. Passenger Corp., 866 F. Supp. 937, 948 (E.D. Va. 1994). And in Lee, this Court rejected the expert testimony of a nuclear engineer who had no previous experience "in the fields of ballistics, trajectory analysis, or crime scene reconstruction." Lee, 2014 WL 5092715, at *9. Defendants cannot reasonably claim that Southwell's relationship to the tire manufacturing standard of care is comparable to a nuclear engineer's relationship to crime scene analysis.

In sum, Defendants' arguments as to the standard of care issue are unpersuasive, and the Court therefore denied their motion as to this issue.

V. CONCLUSION

For the foregoing reasons, this Court denied, with the single exception noted above, HANKOOK TIRE COMPANY LIMITED'S AND HANKOOK TIRE AMERICA COMPANY'S MOTION TO EXCLUDE TESTIMONY OF PLAINTIFF'S EXPERT DAVID SOUTHWELL (ECF No. 54).¹³

It is so ORDERED.

/s/ *REP*

Robert E. Payne
Senior United States District Judge

Richmond, Virginia
Date: February 6, 2018

¹³ Defendants have not meaningfully challenged the relevance of Southwell's testimony. However, the Court observes that his testimony is relevant under Federal Rule of Evidence 401. See Fed. R. Evid. 401. Southwell's testimony as to the causes (and rejected alternative causes) of the subject tire's failure is patently relevant to the products liability inquiry. See Alevromagiros, 993 F.2d at 420. And his testing opinion is relevant, for example, to the government and industry standards analysis as well as to the likelihood that Defendants' manufacturing process could produce a tire with the defects alleged here. See id. This Court's Opinion denying Defendants' motion for summary judgment provides additional detail with respect to how Southwell's testimony aligns with the various elements of a Virginia products liability claim. (ECF No. 343).